

REMARKS

In the Office Action dated March 12, 2003, claims 1-6, 8-13, 15, 17, and 19 were presented for examination. Claim 4 was rejected under 35 U.S.C. §112, second paragraph as being indefinite. Claims 1, 3-6, 8-13, 15, 17, and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Stephens et al.*, U.S. Patent No. 5,406,708, in view of *Iacona et al.*, U.S. Patent No. 5,887,348. Claim 2 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Stephens et al.*, U.S. Patent No. 5,406,708, in view of *Iacona et al.*, U.S. Patent No. 5,887,348, and further in view of *Fogle*, U.S. Patent No. 6,434,837. Claim 8 was objected to as being dependent upon a previously cancelled claim.

Applicants wish to thank the Examiner for the careful and thorough review and action on the merits in this application. The following remarks are provided in support of the pending claims and responsive to the Office Action of March 12, 2003 for the pending application.

On May 7, 2003, Examiner Prone, Primary Examiner Shoap, and Applicant's Attorney met for an Examiner's Interview. During the interview, the features of Applicant's trimmer line assembly were discussed in detail in view of *Stephens et al.* and *Iacona et al.*. It was agreed by the parties present that Applicants would further define the invention in the independent claims 1, 9, and 19 to include details of the flange and collar, and specifically, the fact that they are single unit. It was agreed that such a limitation would overcome the art of record. However, Examiner Shoap refused to discuss the prior art of record further, and proceeded to conclude the interview on the basis that Examiner Prone did not complete the search of the prior art. Although it was agreed that another interview could be requested following a completed search by the Examiner, such a request was not granted at the later date.

I. Objection of Claim 8

In the Official Action of March 12, 2003, the Examiner objected to claim 8 as being dependent on a previously canceled claim. Applicant has amended claim 8 to remove the inappropriate dependency. Accordingly, Applicant respectfully requests the Examiner to remove the objection.

II. Rejection of Claim 4 under 35 U.S.C. §112:

Claim 4 was rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In view of a previous amendment to claim 1, Applicant has canceled claim 4.

III. Rejection of Claims 1, 3-6, 8-13, 15, 17, and 19 under 35 U.S.C. §103(a):

In the Office Action of March 12, 2003, the Examiner assigned to the application rejected claims 1, 3-6, 8-13, 15, 17, and 19 under 35 U.S.C. §103(a) as being unpatentable over *Stephens et al.* ('708) in view of *Iacona et al.* ('348). *Stephens et al.* ('708) relates to a monofilament for cutting vegetation. As shown in Fig. 7 and noted in Col. 3, lines 14-18 of *Stephens et al.*, "a flexible monofilament cutting line 36 is shown at Fig. 7 and is typically manufactured with a predetermined diameter along its length and an encumbrance 38 such as a knot or crimped washer." However, as noted in claims 1, 9, and 19 Applicant's invention accounts for a specific structure of such an encumbrance.

Iacona et al. ('348) relates to a clamping structure for a string trimmer. The clamping structure is comprised of several items, including a collet 64, a collar 66, a spring 68, and a lock 70. See Col. 7, lines 6-10. The vegetation cutting string must be forced through an opening defined by clamping edges 76 and through the passage 78 of the collet 64. See Col. 7, lines 49-

52. However, *Iacona et al.* does not account for a mechanism that is a single unit adapted to hold a monofilament.

Applicant's invention functions on a different principle than that taught in either *Stephens et al.* or *Iacona et al.* The *Stephens et al.* patent accounts for a monofilament cutting line with an encumbrance at one end of the line. There is no consideration given for a specific structure for the encumbrance. Nor is there consideration for a structure that enables a portion of the monofilament line to extend beyond the collar into the trimmer head with a concentric portion of the collar enveloping the line. There is a reference to an encumbrance, but there is no structure shown that discloses the elements of Applicant's collar and flange structure. Accordingly, *Stephens et al.* fails to account for a structure associated with the encumbrance, wherein the encumbrance includes a single unit comprised of a concentric collar and flange with different size diameters associated therewith.

The Examiner uses the *Iacona et al.* patent to support the structure of the collar and flange unit of Applicant. The clamping member of *Iacona et al.* pertains to a member comprised of multiple parts with an unenclosed filament line extending forward and rearward of the clamping member. Fig. 7, item 14. *Iacona et al.* does not provide for: (1) a clamping member being a single unit comprised of a flange and a collar, (2) the collar extending from the flange to the distal end of the monofilament, or (3) the distal end of the monofilament being flush with the distal end of the collar. Accordingly, *Iacona et al.* fails to account for the above-outlined elements of applicant's structure.

It is accepted that "[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." MPEP §2143.03 (citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)). There is no teaching, suggestion, or motivation in *Stephens et al.* for a monofilament line with a collar and flange unit adjacent to a distal end of the monofilament line. Similarly, *Iacona et al.* does not teach or suggest a single unit structure for it's clamping member comprised of a concentric flange and collar with the

flange having an external diameter great than the diameter of the collar. Therefore, each of the prior art references when taken together fail to teach all of the claim limitations and fail to establish the prima facie obviousness of the claimed invention. Accordingly, removal of the rejection of claims 1, 3-6, 8-13, 15, 17, and 19 under 35 U.S.C. §103(a) as being unpatentable over *Stephens et al.* ('708) in view of *Iacona et al.* ('348) is respectfully requested.

IV. Rejection of Claim 2 under 35 U.S.C. §103(a):

In the Office Action of March 12, 2003, the Examiner assigned to the application rejected claim 2 under 35 U.S.C. §103(a) as being unpatentable over *Stephens et al.* ('708) in view of *Iacona et al.* ('348), and further in view of *Fogle* ('837).

Applicant hereby incorporates by reference the comments pertaining to *Stephens et al.* and *Iacona et al.* as discussed above.

Fogle ('837) relates to a monofilament for cutting vegetation. As shown in Figs. 3 and 4 and noted in the Abstract, the monofilament line has an oval cross section. “[T]he cross-sectional shape, taken transversely of the longitudinal axis, is an oval having a major axis A and a minor axis B. The line is modified following extrusion to impart a permanent helical twist along its length; so that concave portions 22, as illustrated in FIGS. 3 and 4, are formed along the length of the line.” Col. 4, lines 2-9. However, as noted in Applicant's amended claim 2 and shown in Fig. 6 Applicant's invention incorporates a non-circular uniform cross section of the monofilament line that extends from the proximal end to the distal end of the monofilament line.

For it to be obvious to combine prior art references, the references must teach, suggest, or motivate one with ordinary skill in the art to combine the references and create the claimed invention. “Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references

themselves or in the knowledge generally available to one of ordinary skill in the art." MPEP §2143.01. The *Fogle* patent does not disclose a monofilament line with a uniform non-circular cross-section extending from the proximal end of the line to the distal end of the line. Instead, *Fogle* teaches a trimmer line with a helical twist between the two ends of the line, such that the line technically does not have a uniform cross section. None of the references disclose information regarding securing a collar and a concentric flange or an equivalent apparatus to a trimmer line in order to reduce the stress and strain on the monofilament, together with a uniform non-circular cross section. Accordingly, none of the prior art references utilized by the Examiner teaches, suggests, or motivates one of ordinary skill in the art into creating a concentric collar and flange, and crimping the collar to the distal end of the trimmer line to enhance the mechanical properties of the trimmer line, wherein the monofilament line has a uniform non-circular cross section, as claimed by Applicant.

Furthermore, the prior art must teach the desirability of the modification suggested by the Examiner. "The mere fact the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Gordon et al.*, 733 F.2d 900, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984). *Fogle* does not disclose a monofilament line with a non-circular and uniform cross section extending from the proximal end to the distal end of the line. None of the prior art references suggests the desirability of the modifications represented by Applicant's claimed invention. Accordingly, Applicant respectfully requests allowance of claim 2 as amended.

In view of the forgoing amendments and remarks, it is submitted that all of the claims remaining in the application are now in condition for allowance and such action is respectfully requested. Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that she be contacted at the number indicated below.

For the reasons outlined above, withdrawal of the rejection of record and an allowance of this application are respectfully requested.

Respectfully submitted,

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